AGENDA ITEM E-10

CITY OF LODI
COUNCIL COMMUNICATION

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AGENDA **TITLE:** Adopt Resolution **to** Approve an Updated Electric Resource Adequacy Program (EUD)

MEETING DATE: October **1,2008**

PREPARED **BY:** Electric Utility Director

RECOMMENDED ACTION: Adopt a resolution to approve an updated Electric Resource Adequacy Program.

BACKGROUND INFORMATION: In April 2006, the City of Lodi established a Resource Adequacy Program to ensure reliable electric service for its customers. This program was implemented as required by the California Independent System Operator Corporation Tariff.

Lodi's Resource Adequacy Program will expire on February 1, 2009. Pursuant to CAISO rules, 2009 Resource Adequacy compliance year demonstrations must be submitted to the CAISO by October 31, 2008. The updated version **is** attached.

The principal change is the addition of a provision that satisfies Lodi's new responsibility to assist the CAISO in ensuring there is sufficient capacity in generation resources to meet the region's power needs in "constrained areas". At certain times this will result in additional cost to Lodi and other times result in revenue for the utility.

Lodi's Resource Adequacy Program must be approved by its Local Regulatory Authority which has been designated as the City Council.

FISCAL IMPACT: None

FUNDING: None

George F. Morrow

George F. Morrow
Electric Utility Director

Prepared By: Ken Weisel, Assistant Electric Utility Director

Attachment

GFM/KW/lst

APPROVED: _____
Blair King, City Manager

RESOLUTION NO. 2008-195

A RESOLUTION OF THE LODI CITY COUNCIL ADOPTING AN UPDATED ELECTRIC RESOURCE ADEQUACY PROGRAM

WHEREAS, to insure sufficient resources to reliably serve the load in its control area, the California Independent System Operator (CAISO) requires the local regulatory authority for each load-serving entity in its control area to adopt a Resource Adequacy Program; and

WHEREAS, the Resource Adequacy Program previously adopted by the City of Lodi will terminate upon the implementation of the CAISO's Market Redesign & Technology Upgrade (MRTU); and

WHEREAS, Lodi, in cooperation with the Northern California Power Agency (NCPA) and other NCPA members, has developed an updated Resource Adequacy Program that meets requirements of the CAISO Tariff now and under MRTU.

NOW, THEREFORE, BE IT RESOLVED that the Lodi City Council does hereby adopt the Resource Adequacy Program attached hereto marked as Exhibit A, replacing the prior Resource Adequacy Program; and

BE IT FURTHER RESOLVED that the City Council hereby authorizes the Electric Utility Director and/or his/her designee to implement the Resource Adequacy Program.

Dated: October 1,2008

I hereby certify that Resolution No. 2008-195 was passed and adopted by the City Council of the City of Lodi in a regular meeting held October 1, 2008, by the following vote:

AYES: COUNCIL MEMBERS – Hansen, Hitchcock, Johnson, and Katzakian

NOES: COUNCIL MEMBERS – None

ABSENT: COUNCIL MEMBERS – Mayor Mounce

ABSTAIN: COUNCIL MEMBERS – None

JENNIFER M. PERRIN
Assistant City Clerk

EXHIBIT A

Resource Adequacy Program

City of Lodi

October 1,2008

Resource Adequacy Program
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1 Background and Purpose of Program

The City of Lodi ("Lodi") recognizes that to achieve a high degree of reliability in the electric service supplied to its customers, an amount of resources sufficient to not only meet the immediate loads of Lodi's customers, but to also permit maintenance, to provide for planned and forced outages, and to account for load forecast errors is required.

In order to achieve a high degree of reliability in the electric service supplied to its customers, Lodi has established this Resource Adequacy Program to accomplish this goal, which includes the following information and requirements:

- Applicability
- Compliance Demonstration
- Demand Forecast
- Planning Reserve Margin
- CAISO Authority to Dispatch Qualifying Capacity
- Qualifying Capacity Rules and Criteria
- Compliance and Enforcement

This Resource Adequacy Program has been developed to coordinate with the rules and requirements incorporated within the California Independent System Operator Corporation ("CAISO) Market Redesign and Technology Upgrade FERC Electric **Tariff** ("MRTU Tariff), **as** applicable to Lodi, and shall become effective at the time the MRTU Tariff is implemented **or** when approved by the **Lodi City Council ("LRA"),** and will remain in effect until terminated by action of the LRA. This Resource Adequacy Program may be modified by the LRA per its discretion.

Capitalized terms not otherwise defined within this Resource Adequacy Program shall be defined as set forth in the Master Definitions Supplement of the MRTU Tariff.

2 Applicability

Pursuant to Section 40 of the MRTU Tariff all Load Serving Entities ("LSE") and their respective Scheduling Coordinators, with limited exemptions, are subject to certain Resource Adequacy requirements based on its election of LSE status. The City currently operates within the CAISO Balancing Authority Area as a Load Following Metered Subsystem, pursuant to the terms of the Amended and Restated NCPA Metered Subsystem Aggregator Agreement ("MSSA Agreement"), as amended from time to time, and therefore is recognized as a Load Following Metered Subsystem entity regarding the application of Resource Adequacy requirements. Therefore, Lodi is required to comply with the requirements encompassed within this Resource Adequacy Program and the CAISO Tariff, as applicable.

3 Compliance Demonstration

Pursuant to this Resource Adequacy Program and the MRTU Tariff Section 40, Lodi is required to provide a system and local area Resource Adequacy demonstration to the CAISO that sets forth the amount of capacity procured by Lodi to satisfy the obligations described below. As a result, NCPA will submit, on behalf of Lodi, the following information to the CAISO:

3.1 Submission of Annual System Resource Adequacy Demonstration

NCPA, acting as Scheduling Coordinator on behalf of Lodi, will submit an annual system Resource Adequacy demonstration to the CAISO for the applicable compliance period on behalf of Lodi, on a schedule and in a format set forth by the MRTU Tariff and the CAISO Business Practice Manual for Reliability Requirements. The annual system Resource Adequacy demonstration will include a monthly coincident peak Demand determination for Lodi for each of the five summer months, May through September, of

the applicable compliance period, established pursuant to Section 4, and identify the megawatt (MW) quantity of Resource Adequacy Qualifying Capacity, established pursuant to Section 7, that Lodi will rely upon to satisfy ninety percent (90%) of its respective monthly coincident peak Demand determination plus the monthly Planning Reserve Margin, established in Section 5, for each of the five summer months, May through September, of the applicable compliance period.

3.2 Submission of Monthly System Resource Adequacy Demonstration

NCPA, acting as Scheduling Coordinator on behalf of Lodi, will submit a monthly system Resource Adequacy demonstration to the CAISO for the applicable compliance period, on a schedule and in a format set forth by the MRTU Tariff and the CAISO Business Practice Manual for Reliability Requirements. The monthly system Resource Adequacy demonstration will include a monthly coincident peak Demand determination for Lodi for the relevant reporting month of the applicable compliance period, established pursuant to Section 4, and identify the megawatt (MW) quantity of Resource Adequacy Qualifying Capacity, established pursuant to Section 7, that Lodi will rely upon to satisfy one-hundred percent (100%) of its monthly coincident peak Demand determination plus the monthly Planning Reserve Margin, established in Section 5, for the relevant reporting month of the applicable compliance period.

3.3 Submission of Annual Local Area Resource Adequacy Demonstration

NCPA, acting as Scheduling Coordinator on behalf of Lodi, will submit an annual local area capacity Resource Adequacy demonstration to the CAISO for the applicable compliance period, on a schedule and in a format set forth by the MRTU Tariff and the CAISO Business Practice Manual for Reliability Requirements. The annual local area Resource Adequacy demonstration will identify the megawatt (MW) quantity of

Resource Adequacy Qualifying Capacity, established pursuant to Section 7, qualified as Local Capacity Area Resources that Lodi will rely upon to satisfy its allocated responsibility for procurement of Local Capacity Area Resources determined pursuant to the MRTU Tariff. The City's allocated responsibility for procurement of Local Capacity Area Resources is based on its proportionate share **of** the Transmission Access Charge ("TAC") Area Load at the time of the CAISO's annual coincident peak Demand set forth in the annual peak demand forecast for the next applicable compliance period, as determined by the California Energy Commission ("CEC"). Those Local Capacity Area Resources identified within the annual local area capacity Resource Adequacy demonstration will count towards Lodi's overall system capacity requirements in addition to meeting Lodi's local Resource Adequacy requirements.

3.4 Submission of Annual and Monthly Resource Adequacy Supply Plans

A Load Following Metered Subsystem LSE such as Lodi is not required, pursuant to the CAISO Tariff, to provide the CAISO with annual and monthly Resource Adequacy Supply Plans for Resource Adequacy Qualifying Capacity that is used to meet its own system and local area Resource Adequacy requirements. To the extent that a Load Following Metered Subsystem LSE such as Lodi provides Resource Adequacy Qualifying Capacity to a Reserve Sharing Load Serving Entity **or** a Modified Reserve Sharing Load Serving Entity, its Scheduling Coordinator is required to provide the CAISO with annual and monthly Resource Adequacy Supply Plans for this quantity of Resource Adequacy Qualifying Capacity. As a result NCPA, acting as a Scheduling Coordinator on behalf of Lodi, will submit annual and monthly Resource Adequacy Supply Plans to the CAISO on behalf **of** Lodi (if required), on a schedule and in a formant set forth in the MRTU Tariff and the CAISO Business Practice Manual for Reliability Requirements. Both **the** annual and monthly Resource Adequacy Supply Plans shall include a listing **of** Lodi's commitments to provide Resource Adequacy Qualifying Capacity to any Reserve Sharing Load Serving Entity or Modified Reserve Sharing Load Serving Entity for the applicable compliance period.

4 Demand Forecast

Pursuant to the CAISO Tariff, Lodi's Resource Adequacy Program shall utilize the monthly coincident peak Demand determination provided by the California Energy Commission for the applicable compliance period, which is based on demand forecast data ("Demand Forecast") submitted to the California Energy Commission by Lodi (or by NCPA on behalf of Lodi), or, if the California Energy Commission does not produce a monthly coincident peak Demand determination for Lodi, the monthly coincident peak Demand determination produced by the CAISO for the applicable compliance period for Lodi in accordance with the MRTU Tariff and the applicable Business Practice Manual, using Demand Forecast data submitted to the CAISO by Lodi (or by NCPA on behalf of Lodi). The monthly coincident peak Demand determination developed and provided by either the California Energy Commission or the CAISO are coincident with the CAISO monthly system peak demand forecast for the applicable compliance period. If the California Energy Commission or the CAISO fail to produce a monthly coincident peak Demand determination for Lodi, the monthly coincident peak Demand determination that will be used for Resource Adequacy compliance shall be equal to Lodi's contribution to the NCPA Pool's monthly coincident peak demand forecasts for the applicable compliance period irrespective of the CAISO system coincident peak.

5 Planning Reserve Margin

The City shall maintain an amount of Resource Adequacy Qualifying Capacity, as described in Section **7,** equal to no less than one-hundred fifteen percent (115%) of Lodi's peak hourly Demand Forecast for the applicable compliance period. The resulting fifteen percent (15%) capacity reserve margin which is in excess of Lodi's peak hourly Demand Forecast, for the applicable month, is referred to **as** the Planning Reserve Margin.

6 CAISO Authority to Dispatch Generation Facilities

As a Load Following Metered Subsystem Entity, Lodi is only required to comply with a limited set of provisions contained within the MRTU Tariff, and is not required to make available its Resource Adequacy Qualifying Capacity used to meet its capacity reserve requirements to the CAISO for Dispatch in the Day-Ahead Market or Real-Time Market. However, the CAISO has authority to dispatch Lodi's Resource Adequacy Qualifying Capacity used to meet its capacity reserve requirements pursuant to the terms of the MSSA Agreement, which is incorporated by reference as it now exists **or** may thereafter be amended.

7 Resource Adequacy Qualifying Capacity Rules and Criteria

7.1 Resource Adequacy Qualifying Capacity

Resource Adequacy Qualifying Capacity shall be the quantity of capacity from a resource, stated in megawatts (MW), which is listed within the Resource Adequacy system and local area capacity demonstration. Resource Adequacy Qualifying Capacity is the megawatt (MW) quantity of capacity from resources, as calculated using the Qualifying Capacity Rules and Criteria, that is used for resource adequacy compliance. The rules and criteria for determining the type **of** resources that may be eligible to provide Resource Adequacy Qualifying Capacity and **for** calculating the quantity of Resource Adequacy Qualifying Capacity provided from eligible resource types is documented within Section **7.2.** Once calculated, the Resource Adequacy Qualifying Capacity will be provided to the CAISO to be used to verify compliance against submitted Resource Adequacy compliance demonstrations.

7.2 Qualifying Capacity Rules and Criteria – Eligible Resource Types

The types of resources specified in Section 7.2 will be eligible to provide Resource Adequacy Qualifying Capacity to the extent that they meet the criteria for each type of resource set forth in this Section 7.2. Net Dependable Capacity ("NDC") defined by North American Electric Reliability Corporation ('WERC'') Generating Availability Data System (''GADS'') information will be used **to** determine the Resource Adequacy Qualifying Capacity of some of the resource types identified in this Section 7.2. For the purpose of this Section 7.2, NDC is equal to Gross Dependable Capacity (''GDC'') less the unit capacity utilized for unit station service or auxiliaries. GDC is equal to ***Gross*** Maximum Capacity (''GMC'') modified for seasonal limitations over a specified period of time. GMC is the maximum capacity a unit can sustain over a specified period of time when not restricted by seasonal or other deratings.

7.2.1 NCPA System

As defined in the MSSA Agreement, the NCPA System means all transmission and distribution facilities owned or controlled by the NCPA Pool participants, including Lodi, and all Generating Units within the CAISO Balancing Authority Area owned or controlled by the NCPA Pool participants or any individual NCPA Pool participant or combination of NCPA **Pool** participants.

7.2.2 Jointly-Owned Facilities

A jointly-owned facility must either be identified in Schedule **14** of the MSSA Agreement, located within the NCPA System, a Participating Generator, a System Resource, or a Qualified Facility to be considered Resource Adequacy Qualifying Capacity. The Resource Adequacy Qualifying Capacity for the entire facility will be determined based on the type of resource as described within Section 7.2. The City's entitlement to the Resource Adequacy Qualifying Capacity of a facility may encompass the entire Resource Adequacy Qualifying Capacity of the facility, or may be limited to a portion of the Resource Adequacy Qualifying Capacity of the facility. The total amount of Resource Adequacy Qualifying Capacity that may be identified in the system and/or

local area capacity compliance demonstration is limited to the total jointly-owned facility Resource Adequacy Qualifying Capacity as determined pursuant to Section 7.2.

7.2.3 Thermal Resources

Thermal generating facilities must either be identified in Schedule 14 of the MSSA Agreement, located within the NCPA System, a Participating Generator, a System Resource, or a Qualified Facility to be considered Resource Adequacy Qualifying Capacity. The Resource Adequacy Qualifying Capacity of thermal facilities will be based on Net Dependable Capacity as defined in Section 7.2.

7.2.4 Hydro Electric Resources

Hydro electric generating facilities must either be identified in Schedule 14 of the MSSA Agreement, located within the NCPA System, a Participating Generator, a System Resource, or a Qualified Facility to be considered Resource Adequacy Qualifying Capacity. The Resource Adequacy Qualifying Capacity of a pond or pumped storage hydro electric facility will be based on Net Dependable Capacity as defined in Section 7.2, minus variable head de-rate based on current reservoir levels with average year forecasted inflows. The Resource Adequacy Qualifying Capacity of a run-of-river hydro electric facility will be based on Net Dependable Capacity as defined in Section 7.2, minus actual or forecasted conveyance flow, stream flow, or canal head de-rate.

7.2.5 Unit-Specific Contracts

Unit-specific contracts will fully qualify as Resource Adequacy Qualifying Capacity. The generating facility identified in the contract must either be identified in Schedule 14 of the MSSA Agreement, located within the NCPA System, a Participating Generator, a System Resource, or a Qualified Facility to be considered Resource Adequacy Qualifying Capacity.

7.2.6 Firm Energy Contracts

Firm energy contracts which contain provisions to ensure reliable physical delivery of Energy and that contain provisions that identify non-delivery as a default condition subject to contract suspension and/or termination, and that does not require the seller to source the Energy from a particular unit, but specifies a delivery point internal to the CAISO Balancing Authority Area will fully qualify as Resource Adequacy Qualifying Capacity.

7.2.7 Industry Standard Contracts with Damages Provisions

Industry standard contracts with damages provisions as generally reflected in Service Schedule C of the Western Systems Power Pool Agreement or the Firm LD product of the Edison Electric Institute pro forma Master Agreement, or any other similar firm energy contract that does not require the seller to source the Energy from a particular unit, but specifies a delivery point internal to the CAISO Balancing Authority Area will qualify as Resource Adequacy Qualifying Capacity until a commercially available industry standardized capacity based product is readily available, and which is provided under an agreement similar to the Western Systems Power Pool Agreement or the Edison Electric Institute pro forma Master Agreement.

7.2.8 Wind and Solar Resources

The Resource Adequacy Qualifying Capacity of wind and solar generating facilities, with backup sources of generation, will be based on Net Dependable Capacity as defined in Section 7.2.

The Resource Adequacy Qualifying Capacity of wind and solar facilities, without backup sources of generation, will be based on their monthly historic noon to 6:00 p.m. capacity factor, using a three-year rolling average.

Wind and solar generating facilities without backup sources of generation which do not have three years of historic performance data will be assigned a default Resource Adequacy Qualifying Capacity value for each year of missing historical performance as follows:

- The Resource Adequacy Qualifying Capacity of a solar or wind generator with historic data located in the same weather regime with similar technology adjusted for the nameplate capacity ratio of a new generator and the similarly situated proxy generator.

- If historical data of a solar or wind generator located in the same weather regime with similar technology is not available, then historic performance data from the monthly average production factors of all units (wind or solar) within the TAC Area in which the generator is located will be utilized.

The default Resource Adequacy Qualifying Capacity values will be replaced on a year by year basis with actual performance data as the data becomes available to form a three year rolling average.

7.2.9 Geothermal Resources

Geothermal generating facilities must either be identified in Schedule **14** of the MSSA Agreement, located within the NCPA System, a Participating Generator, a System Resource or a Qualified Facility to be considered Resource Adequacy Qualifying Capacity. The Resource Adequacy Qualifying Capacity of a geothermal facility will be based on Net Dependable Capacity as defined in Section **7.2,** adjusted for steam field degradation.

7.2.10 Participating Loads

Participating Loads must either be identified in Schedule 14 of the MSSA Agreement or located within the NCPA System to be considered Resource Adequacy Qualifying Capacity. Participating Loads must be available at least 48 hours during the five summer months (May – September) to be counted in a system and/or local area Resource Adequacy compliance demonstration as Resource Adequacy Qualifying Capacity. If Participating Loads are available for the minimum requirement, the stipulated megawatt (MW) quantity reduction in Demand will be treated as supply and be eligible to be listed as Resource Adequacy Qualifying Capacity.

7.2.11 Dispatchable Demand Resources

Dispatchable Demand resources must either be identified in Schedule 10B of the MSSA Agreement or located within the NCPA System to be considered Resource Adequacy Qualifying Capacity. Dispatchable Demand resources must be available at least 48 hours during the five summer months (May – September) to be counted in a system and/or local area Resource Adequacy compliance demonstration as Resource Adequacy Qualifying Capacity. If a Dispatchable Demand resource is available for the minimum requirement, the megawatt (MW) quantity reduction stipulated in the contract or program will be treated as supply and be eligible to be listed as Resource Adequacy Qualifying Capacity.

7.2.12 Facilities Under Construction

Resource Adequacy Qualifying Capacity for facilities under construction will be determined based on the type of resource as described elsewhere in this Section 7.2. The facility will be eligible to be identified as Resource Adequacy Qualifying Capacity in a system and/or local area capacity compliance demonstration of Lodi pursuant to the anticipated operational date of the facility.

7.2.13 Non-Dynamically Scheduled System Resources (Imports)

The Resource Adequacy Qualifying Capacity of Nan-Dynamically Scheduled System Resources to which Lodi has an entitlement shall be the amount of Lodi's entitlement, measured in megawatts (MW).

7.2.14 Dynamically Scheduled System Resources (Imports)

The Resource Adequacy Qualifymg Capacity of a Dynamically Scheduled System Resource to which Lodi has an entitlement shall he the amount of Lodi's entitlement. Eligibility as Resource Adequacy Qualifying Capacity is contingent upon Lodi securing transmission through any intervening Balancing Authority Areas for the resource entitlement that cannot be curtailed for economic reasons or due to higher priority transmission.

8 Compliance and Enforcement

Once the CAISO has received the system and/or local area capacity compliance demonstrations submitted by NCPA on behalf of Lodi, acting as Scheduling Coordinator, the CAISO will verify that Lodi has procured sufficient Resource Adequacy Qualifying Capacity to comply with the Planning Reserve Margin established in Section **5**, and any requirements established by Lodi's LRA. To the extent the system and/or local area capacity demonstrations do not include sufficient Resource Adequacy Qualifying Capacity to satisfy the Planning Reserve Margin and/or the Local Capacity Area Resource Adequacy requirements, or in the case of a mismatch between information included in the compliance demonstration and the Resource Adequacy Supply Plan submitted by the Scheduling Coordinator of **a** resource identified in Lodi's compliance demonstration, the CAISO will notify NCPA and attempt to resolve the issue. **To** the extent that NCPA is unable to resolve the identified issue, the CAISO will notify Lodi's LRA of the potential deficiency.

Once Lodi's LRA is informed of the identified deficiency and confirms that Lodi's system and/or local area capacity compliance demonstration is deficient, Lodi's LRA

may determine if and how the deficiency will be resolved. If the CAISO identifies a mismatch between the information included in Lodi's system and/or local area capacity compliance demonstration and a Resource Adequacy Supply Plan submitted by the Scheduling Coordinator of a resource identified in the Resource Adequacy compliance demonstration, and the identified mismatch is not resolved prior to the 10th day before the effective month during the applicable compliance period, the CAISO will accept the value contained in the Supply Plan to set the Resource Adequacy Qualifying Capacity value for the applicable compliance period.

If Lodi's **LRA** requires Lodi to resolve an identified deficiency in the system and/or local area capacity compliance demonstration, and Lodi has not resolved the identified deficiency, Lodi must provide an explanation as to why the identified deficiency has not be resolved to its **LRA.** The City may incur penalties or other sanctions adopted by Lodi's **LRA** for failure to cure the deficiency. NCPA, acting as Scheduling Coordinator, is required **to** report to the **CAISO** within thirty **(30)** days of any action taken by Lodi's **LRA** in response to the deficiency notification if Lodi's **LRA** does not provide public access to records or information regarding action taken for violations of Lodi's Resource Adequacy Program policies **or** rules.